Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An airbreathing fuel cell comprising end plates, a unit cell having a central core and disposed between the two end plates, a fuel distribution manifold disposed centrally of the unit cell to supply a fuel thereto, a single tie bolt extending centrally of the fuel distribution manifold and of the unit cell to unite these elements, fixing nuts screwed onto both ends of the tie bolt to integrally clamp the unit cell between the end plates with O-rings or the like therebetween, and

a cell stack formed by stacking a plurality of those unit cells, which comprise a solid polymer electrolyte membrane, an oxygen electrode and a fuel electrode, which are provided on both sides of the solid polymer electrolyte membrane to be opposed to each other,

~~an~~ a porous oxygen passage plate provided adjacent and toward the oxygen electrode, and

separator plates provided adjacent and outside the oxygen passage plate and the fuel electrode, and

wherein the oxygen passage plate comprises a plurality of opened grooves on a surface thereof opposed to

the oxygen electrode, and the grooves are opened to an outer periphery of the porous oxygen passage plate and not extending to and therefore being closed to the central bore.

2. (Original) The airbreathing fuel cell according to claim 1, wherein blowers for blasting an air into the grooves formed on the oxygen passage plates are provided on the fuel cell to face the grooves.

3. (Original) The airbreathing fuel cell according to claim 2, wherein the blowers are arranged in opposition to the both opened ends of the grooves on the oxygen passage plates of the cell stack to blast an air whereby an air can be supplied centrally of the oxygen passage plates from the both ends of the grooves.

4. (Original) The airbreathing fuel cell according to claim 3, wherein the blowers for the cell stack are provided at least one by one on sides of the both opened ends of the grooves of the oxygen passage plates and on respective sides in parallel to the grooves, and the blowers provided on the opposed sides are provided in opposition to each other respectively to blast an air to the oxygen passage plates.

5. (Original) The airbreathing fuel cell according to any one of claims 1 to 4, wherein an outer peripheral surface of the cell stack is rectangular in shape.

6. (Withdrawn) In an airbreathing fuel cell comprising at least one unit cell having a central bore extending therethrough, each said unit cell comprising, between a pair of separator plates, and in adjacent relationship, a fuel electrode, a solid electrolyte membrane, an oxygen electrode and a porous oxygen passage plate, the improvement wherein

the porous oxygen passage plate comprises a plurality of oxygen passage grooves in a surface of said porous oxygen passage plate which faces away from said oxygen electrode and toward a said separator plate, the grooves being open to an outer periphery of the porous oxygen passage plate and not extending to and therefore being closed to the central bore.

7. (Withdrawn) The airbreathing fuel cell according to claim 6 comprising a generally circular rib surrounding the bore which provides the closing of the grooves to the bore.

8. (Withdrawn) The airbreathing fuel cell of claim 7 further comprising a generally circular groove surrounding said generally circular rib.

9. (Withdrawn) The airbreathing fuel cell according to any one of claims 6-8, wherein the outer periphery of the unit cell is rectangular in shape.

10. (Withdrawn) The airbreathing fuel cell of claim 9, further comprising at least one blower adapted to force air into said grooves.

11. (Withdrawn) The airbreathing fuel cell according to any one of claims 6-8 further comprising at least one blower adapted to force air into said grooves.

12. (New) The airbreathing fuel cell according to claim 1, wherein said porous oxygen passage plate is made of carbon.

13. (New) The airbreathing fuel cell according to claim 1, further comprising means for forcibly feeding air into said grooves in order to provide air having a high density in said grooves.